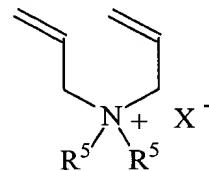


6. A composition according to Claim 5 wherein said dye maintenance polymer is a co-polymer comprising a linearly polymerizing monomers and a cyclically polymerizing monomer, said cyclically polymerizing monomer having the formula:

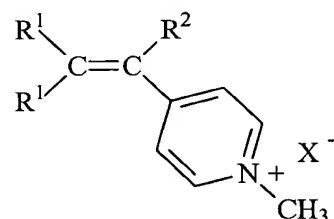


wherein R<sup>5</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, and mixtures thereof; X is a water soluble anion.

a2

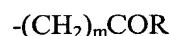
7. A composition according to Claim 5 wherein the dye maintenance polymer is selected from the group consisting of homopolymers, co-polymers, ter-polymers and mixtures thereof, of diallyl dimethylammonium chloride, bromide or methyl sulfate and a co-monomer selected from the group consisting of acrylic acid, methacrylic acid, C<sub>1</sub>-C<sub>6</sub> alkylmethacrylate, C<sub>1</sub>-C<sub>6</sub> alkyl acrylate, C<sub>1</sub>-C<sub>8</sub> hydroxyalkylacrylate, C<sub>1</sub>-C<sub>8</sub> hydroxyalkylmethacrylate, acrylamide, C<sub>1</sub>-C<sub>16</sub> alkyl acrylamide, C<sub>1</sub>-C<sub>16</sub> dialkylacrylamide, 2-acrylamido-2-methylpropane sulfonic acid or its alkali salt, methacrylamide, C<sub>1</sub>-C<sub>16</sub> alkylmethacrylamide, C<sub>1</sub>-C<sub>16</sub> dialkylmethacrylamide, vinyl formamide, vinylacetamide, vinyl alcohol, C<sub>1</sub>-C<sub>8</sub> vinylalkylether, vinyl pyridine, itaconic acid, vinyl acetate, vinyl propionate, vinyl butyrate and mixtures thereof.

8. A composition according to Claim 5 wherein said dye maintenance polymer a co-polymer comprising a linearly polymerizing monomers and a cyclically polymerizing monomer, said cyclically polymerizing monomer having the formula:



wherein R<sup>5</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl, and mixtures thereof; X is a water soluble anion.

9. A composition according to Claim 5 comprising a co-polymer wherein Z has the formula:



wherein each R is independently -O(CH<sub>2</sub>)<sub>n</sub>N(R<sup>3</sup>)<sub>2</sub>; -O(CH<sub>2</sub>)<sub>n</sub>N<sup>+</sup>(R<sup>3</sup>)<sub>3</sub>X<sup>-</sup>; -(CH<sub>2</sub>)<sub>n</sub>N(R<sup>3</sup>)<sub>2</sub>; -(CH<sub>2</sub>)<sub>n</sub>N<sup>+</sup>(R<sup>3</sup>)<sub>3</sub>X<sup>-</sup>; and mixtures thereof, m is 0, n is from 2 to 4.